

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Gunnar Bjertnaes
App. No : 10/535,619
Filed : January 4, 2006
For : SKI WITH BINDING ASSEMBLY
AID, METHOD FOR PRODUCTION
OF SUCH A SKI AND
CORRESPONDING ASSEMBLY AID
Examiner : Jeffrey J. Restifo
Art Unit : 3618
Conf No. : 7613

DECLARATION OF GUNNAR BJERTNAES UNDER 37 C.F.R. §1.132

1. I, Gunnar Bjertnaes, am the sole inventor of the inventions claimed in the above captioned patent application. I am employed by Madshus AS, a Norwegian corporation that is the assignee of this application. My title at Madshus AS is Technical Director.
2. I have worked in the field of skis, ski bindings, and ski binding plates for 38 years.
3. In the sport of cross country skiing, different portions of the ski bottom are used for different purposes. When traveling downhill, the center of the ski should be off the surface of the snow, and the skier should be gliding on the frontward and rearward portion of the skis. The frontward and rearward portions are provided with "glide wax" for fast downhill travel. When traveling uphill, the center of the ski should make contact with the surface of the snow for traction in pushing the skier uphill. The center of the ski is provided with "kick wax," which is stickier than glide wax, for grip against the snow when pushing uphill.

4. In order to provide the above describe behavior during skiing, the ski is provided with a camber, such that the center of the ski is raised from the surface of the snow in the absence of body weight. The skis are designed such that when half the skiers body weight is on each ski for gliding, the center of the ski is still slightly off the snow. When the skier pushes down and against the snow when kicking uphill, putting 100% or more weight on a given ski at a time, the center of ski comes into solid contact with the snow.

5. In general, the camber of the ski and its behavior during gliding and kicking is affected by the presence of the binding plate on the ski. It is important to maintain the camber and the behavior as much as possible, as if the binding plate were not present. Appendix A shows two graphs of the height of the bottom of the ski off a flat resting surface in the vertical axis, and the distance from the center of the ski along the horizontal axis. Figure 1 illustrates the behavior of a ski with no binding plate. As seen in line 10 of Figure 1, the center of the ski is 20 mm above the surface with no weight applied. As seen in line 20 of Figure 1, the center of the ski is 0.87 mm above the surface with half body weight (30 kg) applied. Figure 2 illustrates the behavior of a ski with a binding plate according to the invention applied with adhesive to the ski. As seen in line 12 of Figure 2, the center of the ski is 19.5 mm above the surface with no weight applied. As seen in line 22 of Figure 2, the center of the ski is 0.83 mm above the surface with half body weight (30 kg) applied. Figure 3 illustrates the behavior of a ski with a prior art binding plate attached with screws. As seen in line 14 of Figure 3, the center of the ski is 18.5 mm above the surface with no weight applied. As seen in line 24 of Figure 3, the center of the ski is 0.73 mm above the surface with half body weight (30 kg) applied.

6. Since the introduction of the invention, a large number of competition skiers have adopted the adhesive secured binding plate of the invention. In the 2010 Olympic Games in Vancouver, 82.5% of the medals won in cross country ski events were won with athletes using the adhesive secured binding plate of the invention (referred to as the NIS plate). Appendix B shows the results from this Olympics. The medal winners were from a variety of countries, and

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skied on skis from a variety of manufacturers, including Fischer, Rossignol, Madshus, and Peltonen.


Penalty of Perjury Statement

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful, false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful, false statements may jeopardize the validity of the application or any patent resulting therefrom.

Respectfully submitted,

Dated: July 20 2010

By:

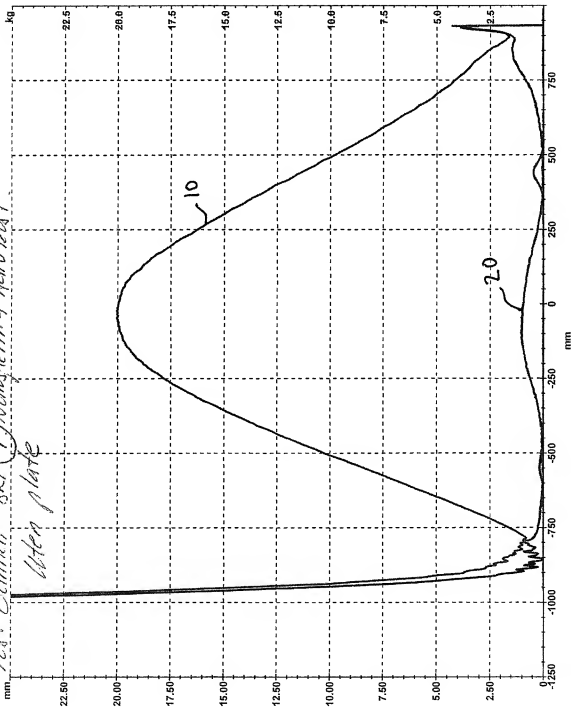

Gunnar Bjertnaes

9268106
062810

APPENDIX A

Compuflex

Test bunnar ski: D. Nylund + Halvlast
uten plate



Framsaki

Baksaki

FIG. 1

Dato: 23.03.2010 13:39:31

Rom:

Skitype: 152 Nanosonic Carbon c

Serienummer:

Skilengde: 200 cm

Lastpunkt: BP -80 mm

Slippkraft: 38.3 kg

Løpervekt: 60 kg

Halvlast: 30 kg

Kn: 0.83 mm

FBP: -412 mm

BBP: 321 mm

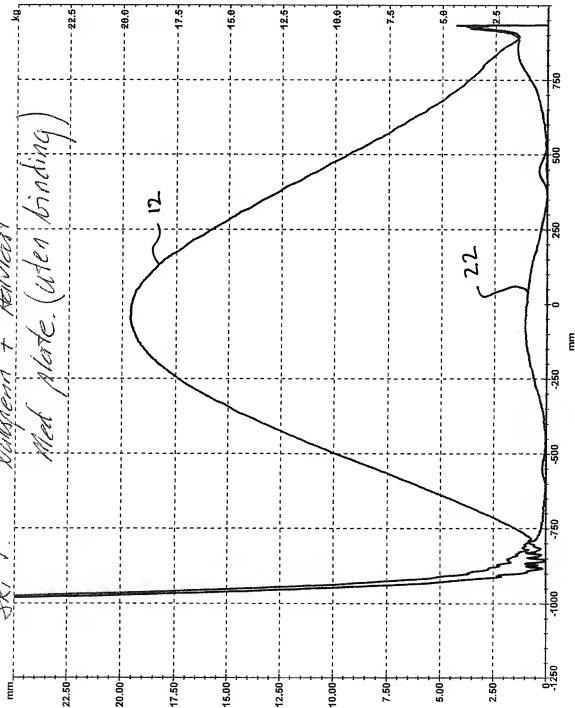
— Profil uten last

— Profil halv last

— Trykkfordeling halv last

Compuflex

Ski 9 Vålgrens + Halvlast
Med plate. (uten binding)



Framski

Bakski

FIG. 2

Dato: 24.03.2010 10:28:21

Rom:

Skitype: 152 Nanosonic Carbon c

Serienummer:

Skilengde: 200 cm

Lastpunkt: BP -80 mm

Slippkraft: 39.0 kg

Løpervekt: 60 kg

Halvlast: 30 kg

Kh: 0.87 mm

FBP: -410 mm

BBP: 317 mm

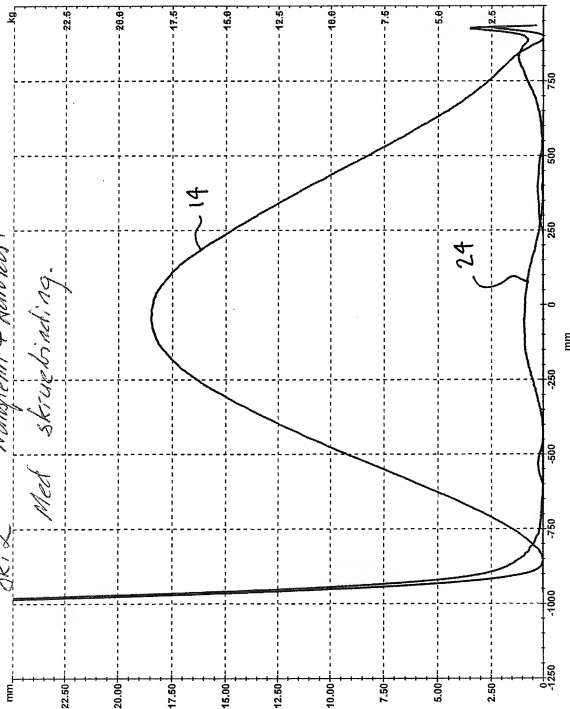
— Profil uten last

— Profil halv last

— Trykfordeling halv last

Compuflex

Skil 2 Mullgeen + Halvlast
Med skrubinding.



Framsli

Bakski

FIG. 3

Dato: 24.03.2010 10:13:15

Rom:

Skitype: 152 Nanosonic Carbon c

Serienummer:

Skilengde: 200 cm

Lastpunkt: BP -80 mm

Slippkraft: 37.2 kg

Løpervekt: 60 kg

Halvlast: 30 kg

Kh: 0.73 mm

FBP: -369 mm

BBP: 299 mm

— Profil uten last

— Profil halv last

— Trykkfordeling halv last

APPENDIX B

Vancouver 2010

	NIS	with Rottefella	tot.
Biathlon	42	37	48
Cross Country	46	30	48
Nordic Combined	6	3	18
tot. =	94	70	114

% NIS of tot. 82.50%

% NIS-Rottefella of tot. 61.40%

Biathlon Olympic Winter Games 2010 Vancouver

Medals	Name	Country	NIS	Rottefella with NIS	tot.
Mens 4x7.5 km Relays					
Gold	Hanevold, Halvard	NOR	1	1	1
	Boe Tarjei		1	1	1
	Svendsen Emil		1	1	1
	Bjoerndalen Ole Einar		1	1	1
Silver	Eder, Simon	AUT	1		1
	Mesotsich, Daniel		1		1
	Landertinger, Dominik				1
	Sumann, Christopher				1
Bronze	Tcheresov, Ivan	RUS	1	1	1
	Shipulin, Anton		1	1	1
	Tchoudov, Maxim		1		1
	Ustyugov, Evgeny		1	1	1
Women's 4x6 km Relay					
Gold	Sleptsova, Svetlana	RUS	1	1	1
	Bogaliy-Titovets, Anna		1	1	1
	Medvetseva, Olga		1	1	1
	Zaitseva, Olga		1	1	1
Silver	Brunet, Marie Laure	FRA			1
	Beckaert, Sylvie				1
	Dorin, Marie		1	1	1
	Bailly, Sandrine		1	1	1
Bronze	Wilhelm, Kati	GER	1	1	1
	Hauswald, Simone		1		1
	Beck, Martina		1	1	1
	Henkel Andrea				1
Women's 12.5 km Mass Start					
Gold	Neuner, Magdalena	GER	1	1	1
Silver	Zaitseva, Olga	RUS	1	1	1
Bronze	Hauswald, Simone	GER	1		1
Men 15 km Mass Star					
Gold	Utsiugov, Evgeny	RUS	1	1	1
Silver	Fourcade, Martin	FRA	1	1	1
Bronze	Hurajt, Pavol	SVK	1	1	1
Men 20 km Individual					
Gold	Svendsen, Emil Hegle	NOR	1	1	1
Silver	Bjoerndalen, Ole Einar	NOR	1	1	1
Silver	Novikov, Sergey	BLR	1	1	1

Women 15 km Individual

Gold	Berger, Tora	NOR	1	1	1
Silver	Khrustaleva, Elena	KAZ	1	1	1
Bronze	Domracheva, Darya	BLR	1	1	1

Men 12.5 km Pursuit

Gold	Ferry, Björn	SWE	1	1	1
Silver	Sumannn, Christoph	AUT			1
Bronze	Jay, Vincent	FRA	1	1	1

Women 10 km Pursuit

Gold	Neuner, Magdalena	GER	1	1	1
Silver	Kuzmina, Anastasiya	SVK	1	1	1
Bronze	Brunet, Marie Laure	FRA	1	1	1

Men 10 km Sprint

Gold	Jay, Vincent	FRA	1	1	1
Silver	Svendsen, Emil Hegle	NOR	1	1	1
Bronze	Fak, Jakov	CRO	1	1	1

Women 7.5 km Sprint

Gold	Kuzmina, Anastasiya	SVK	1	1	1
Silver	Neuner, Magdalena	GER	1	1	1
Bronze	Dorin, Marie	FRA	1	1	1

42	37	48
NIS	with	tot.
	Rottefella	

% NIS of tot: 87.50%

% NIS Rottefella of tot; 77.10%

Nordic Combined Olympic Winter Games 2010 Vancouver

Medals	Name	Country	NIS	Rottefella with NIS	tot.
Individual NH/ 10 km CC					
Gold	Lamy Chappius, Jason	FRA	1		1
Silver	Spillane, Johnny	USA			1
Bronze	Pittin Alessandro	ITA			1
Team, 4x5 km Relay					
Gold	Gruber, Bernhard	AUT	1		1
	Kreiner, David		1		1
	Gottwald, Felix				1
	Stecher, Mario				1
Silver	Camerota, Brett	USA	1	1	1
	Lodwik, Todd		1	1	1
	Spilane, Johnny				1
	Demong, Bill				1
Bronze	Rydzek Johannes	GER			1
	Edelmann, Tino			1	1
	Frenzel, Eric				1
	Kirchelsen, Bjoern				1
10 km Cross Country					
Gold	Demong, Bill	USA			1
Silver	Spillane, Johnny	USA			1
Bronze	Gruber, Bernhard	AUT	1		1

6	3	18
NIS	with Rottefella	Tot.

% NIS of tot. 33.30%

% NIS-Rottefella of tot. 16.70%

Cross Country Olympic Winter Games 2010 Vancouver

Medals	Name	Country	NIS	Rottefella with NIS	tot.
Mens 4x10 km Relay					
Gold	Rikardsson, Daniel	SWE	1	1	1
	Olsson, Joahn		1		1
	Soedergren, Anders		1		1
	Hellner, Marcus		1		1
Silver	Johnsrud Sundby, Martin	NOR	1	1	1
	Hjelmset, Odd Bjoern		1	1	1
	Berger, Lars		1	1	1
	Northug, Petter jr.		1	1	1
Bronze	Jaks, Martin	CZE	1	1	1
	Bauer, Lucas		1	1	1
	Magal, Jiri		1		1
	Koukal, Martin		1	1	1
Women's 4x5 km Relay					
Gold	Skofterud, Vibeke W.	NOR	1	1	1
	Johaug, Therese		1		1
	Steira, kristin Stoermer		1		1
	Bjoergen, Marit		1	1	1
Silver	Zeller, Katrin	GER	1	1	1
	Sachenbacher Stehle, Evi		1	1	1
	Goessner, Miriam		1	1	1
	Nystad, Claudia		1		1
Bronze	Muranen, Pirjo	FIN	1		1
	Kuitunen, Virpi		1	1	1
	Roponen, Riitta-Liisa				1
	Saarinén, Aino Kaisa		1	1	1
Mens 50 km					
Gold	Northug Petter jr.	NOR	1	1	1
Silver	Teichman Axel	GER	1	1	1
Bronze	Olsson Johan	SWE	1		1
Women's 10 km					
Gold	Kalla Charlotte	SWE	1		1
Silver	Smigun-Vahei, kristina	EST	1		1
Bronze	Bjoergen, Marit	NOR	1	1	1

Mens 15 km F

Gold	Cologna , Dario	SUI	1	1	1
Silver	Piller Cotrer, Pietro	ITA	1	1	1
Bronze	Bauer, Lukas	CZE	1	1	1

Woman's SP 1,5 km C Finale

Gold	Bjoergen , Marit	NOR	1	1	1
Silver	Kowalczyk, Justyna	POL	1		1
Bronze	Majdic, Petra	SLO	1	1	1

Mens SP 1,5 km C Final

Gold	Klukov, Nikita	RUS	1	1	1
Silver	Panzhinskiy, Alexander	RUS	1	1	1
Bronze	Northug, Petter jr.	NOR	1	1	1

Women's 15 km M Pursuit

Gold	Bjoergen, Marit	NOR	1	1	1
Silver	Haag, Anna	SWE			1
Bronze	Kowalczyk, Justyna	POL	1		1

Mens 30 km M Pursuite

Gold	Hellner, Marcus	SWE	1		1
Silver	Angerer, Tobias	GER	1	1	1
Bronze	Olsson, Johan	SWE	1		1

Womens 30 km C Mst

Gold	Kowalczyk, Justyna	POL	1		1
Silver	Bjoergen, Marit	NOR	1	1	1
Bronze	Saarinén, Aino- Kaisa	FIN	1	1	1

46	30	48
NIS	with	tot.
Rottefella		

% NIS of tot. 95.80%

% NIS-Rottefella of tot. 63%